

IN-SITU DATA SHEET

Please read the policies and procedures in the NCEM User Guide and complete this In-Situ data sheet. Answer all pertinent questions and attach to NCEM Proposal.

Support for HVEM/ARM _____ AEM _____ In-Situ Only _____
Project Duration: Short Term (< 3 mos.) _____ Long Term (> 3 mos.) _____

Operator Background (Please rate your competence on a scale: 1 = Fully Conversant; 5 = Beginner)
JEOL 200CX _____ TEM Video Recording _____ Heating Holders _____ In-Situ Experimental Holders _____
TEM Courses taken on campus _____ Other Experience _____
Need: Someone to Drive Microscope ? _____ Need Training ? _____ Need Set Up Only ? _____

Material

What is the material _____ Approx. Chemical Composition _____

Thin Foil _____ Crystalline _____ Amorphous _____ Metallic _____ Ceramic _____ Powder _____ Other _____

Preparation

Electrochemical Polished _____ Ion Milled _____ Powder Dispersion _____ Microtome _____ Extraction Replica _____
Other _____

Nature of Specimen

Self Supporting _____ 3 mm Grid _____ Grid Material _____ Glued to Grid _____ Type of Glue _____ Epoxy _____
Ag Paint _____ Carbon Coated _____ Other Coatings _____ Holey Carbon Substrate for Suspension _____
Other substrate Material for Suspension _____ Beam Sensitive _____ Radioactive _____ Toxic _____

Experiment to be Performed

Routine Screening _____ Routine TEM _____ SAD and CBED _____ Video Recording _____ Other _____
Single Tilt Holder _____ Double Tilt Holder _____

In-Situ Experiments _____

Single-Tilt Heating Holder (<1300C) _____ Target Temperature _____ Note: Please provide all copies of phase diagrams of your material associated with heating of both Molybdenum and Tantalum furnace components with this request. Scheduling the use of this holder and/or video temperature recording computer accessories requires at least two days advance notice with technician in charge.

Double-Tilt Heating Holder (<1000C) _____ Target Temperature _____ Note: Same requirements as the Single-Tilt Heating Holder above.

Double-Tilt Electrical Biasing Holder (Max. Voltage 100V, Current 1 A) _____ Target Conditions _____

Single-Tilt Electrical Biasing Heating Holder (Max. Voltage 100V, Current 1 A, Temperature <950C) _____

Target Temperature and Conditions _____

Note: See information needed above under Single Tilt Heating Stage

Electrochemical Biasing Holder (Max. Voltage 150V, Current 1A, Electrolyte Reservoir 3mm x 2mm x 1mm) _____

Proposed Experiment _____